

**CHLORINATION AND DISINFECTION PROCEDURES
PRIVATE WELL WATER SUPPLIES
WELL POLICY (WP-CD)**

It is advised that you read this entire procedure before you begin the chlorination process.

DOSAGE

Drilled Wells: Use either 1-cup of liquid chlorine laundry bleach (5 ¼% chlorine) or 1/3 cup of granular swimming pool type chlorine (70% available chlorine) per 20 feet of the well depth. The granular is preferred for wells deeper than 100 feet. It is also recommended for any well to use half liquid bleach and half granular chlorine. The above concentration of chlorine should ensure an adequate amount to properly disinfect the system - approximately 100 ppm.

Dug or Augured Wells: These wells will not be certified by the Health Department as potable water supplies, since they rely on shallow water sources which cannot be properly protected. However, if you wish to disinfect this type of well, it is recommended that you use the following amounts of chlorine. For wells 3-feet in diameter, use 1 ½ cup of bleach per foot of standing water. For wells 4-feet in diameter, use 2 cups of bleach per foot of standing water.

Note: If the water is cloudy or contains iron, double the dosage to ensure sufficient disinfection.

If you have treatment equipment, you must check with the manufacturer and/or the installer to determine if the chlorine will harm the system and to determine what chlorine levels can be used to disinfect the treatment equipment.

PROCEDURE

1. A. Turn off any electric hot water heater at the circuit breaker.
 B. Turn any gas hot water heater control to “pilot”.
2. Un-dissolved granular and solid chlorine tablets can cause a large delay in the flushing process. Some brands are in a time-released or slow dissolve form and should not be used. It is strongly recommended that the chlorine be partially or completely dissolved in a clean plastic bucket filled with warm water, prior to being introduced into the well. A small amount of solid chlorine should be allowed to sink to the bottom of the well to ensure complete disinfection of the well.
3. Remove the well cap and introduce the chlorine directly into the well.
4. Insert a hose from a faucet into the top of the well and re-circulate water into the well for two hours to ensure mixing of the chlorine and water. Then wash the interior casing, cap and pump apparatus thoroughly with the chlorinated water. Remove the hose and install the cap. No cap other than a watertight, two-piece, screen vented cap should be installed. Do not install a pump recovery rope outside the well casing.
5. Run the outside faucets one at a time until a strong odor of chlorine is present. Any outside water lines to out buildings must also be chlorinated. **Remember, do not run the chlorinated water through any treatment/filtration device without first checking with the manufacturer or installer.**

6. Run all outlets inside the house, hot and cold, until the chlorine odor is detected. Ice- makers, kitchen sink sprayers, dishwasher, showerheads, and washing machine must be also chlorinated.
7. Do not use any water for a minimum of twelve (12) hours; twenty-four (24) is preferred. **Caution:** using water with high levels of chlorine can cause injury to the skin, eyes, and clothing.
8. After the holding time, test the water for chlorine residual. A swimming pool test kit can be used. There should be at least a 5-ppm (mg/l) of chlorine residual in the system. If less, the system may not have been adequately disinfected and should be re-chlorinated following steps 2-7. Flush the hot water tank using a hose to the sump pump or outside on the ground. This water should not be used for irrigation or human consumption. It also should not be discharged into the septic system. Flush the remainder of the plumbing system through an outside faucet. All other plumbing fixtures must be flushed to remove the chlorine. It is recommended that you run the well pump one (1) to two (2) hours at a time, allowing an equal amount of rest time.
9. The chlorine level should be reduced to below 0.5 ppm before use of the water. The chlorine level must be zero (0) before a sample can be secured.

Your water supply needs to be sampled after having completed this chlorination procedure. The first sample should not be collected until at least seven (7) days after the chlorine is removed. For a new or replacement well two (2) consecutive good bacteriological samples and one good chemical sample are required for a Certificate of Potability per the Code of Maryland Regulation (CoMAR) 26.04.04. Harford County Policy WP-A recommends the same sampling regimen for existing wells prior to certification or approval and use of any private water supply. To schedule a water sample or if you have any questions, please feel free to contact the Health Department at 410-877-2325 or 410-877-2324.

Below is a list of State Certified Private Laboratories. The use of one of these labs will expedite the collection and analysis of your water. Results are usually provided within forty-eight hours after the sample is secured.

Trace Laboratories
5 North Park Drive
Hunt Valley, MD 21230
(410)252-7742

Community Environmental
1202 Technology Dr., Suite F
Aberdeen, Maryland 21001
(410)273-7600

Fountain Valley Analytical
1413 Old Taneytown Road
Westminster, MD 21158
(410)848-1014

Water Testing Lab of MD
5 Riggs Avenue
Severn Park, MD 21146
(410)838-8411

Enviro-Chem Lab, Inc
47 Loveton Circle, Suite K
Sparks, MD 21152
(410)472-1112

Caliber Analytical Services
8851 Orchard Tree Lane
Towson, MD 21286
(410)825-1151

Penniman & Browne, Inc
6252 Falls Rd
P. O. Box 65309
Baltimore, MD 21209
(410)825-4132

Caswell Testing
3515 N Furnace Rd
Jarrettsville, MD 21084
(410)557-9355